DNFSB Report
Electrical Safety Program
Evaluation
Savannah River Site

7-19-01

The DNFSB "Staff Issue Report", dated April 16, 2001, raised several issues which I will address, individually, in this document.

Issue # 1 "Electrical Safety during Excavation"

The report identified the following:

"Existing detection equipment at SRS is capable of adequately detecting the location of underground utilities. However, because survey markers are easily moved, there is a need to establish a time limit between the survey and the initiation of work. In addition, electrical personnel should be trained to understand the limitations of detection equipment."

Response:

The Senior Electrical Review Board (SERB) pursued the issue of a time limit with the SRS Safety Department. Although SRS requires "painted markings" be made on the ground, which can't be removed as easily as survey flags, the possibility exists for those markings to disintegrate over time, as well. As a result of subsequent discussions, the applicable SRS procedure (8Q, 34 "Excavations and Trenches") was revised to require a "specific timeframe" be established for that purpose. That revision is in effect, today. The same procedure requires safety reviews to be performed and documented for all jobs involving excavations and trenches. Authorization permits are required for all excavations, and the Site Electrical Safety Manual governs all excavations or penetrations of surfaces where there is any possibility that the workers might encounter energized electrical wiring or components. The locating equipment operators are trained on the proper operation as well as the limitations of each unit. No further action is planned at this time.

Issue # 2 " Authority Having Jurisdiction (AHJ)"

The report identified the following:

"During its review of the electrical safety programs at LLNL, Y-12, and SRS, the Board's

staff observed that although the contractors had established an AHJ program, no structured effort had been made to identify non-listed and non-compliant electrical equipment that failed to meet the acceptance criteria set forth in the Electrical Safety Handbook. "

Response:

The SRS electrical safety program and SRS site Standards Board (Electrical Technical Committee) address both the AHJ responsibility and the listed versus unlisted electrical equipment issues. The present requirement to procure "listed" electrical equipment has been in place for many years. There is also a Site requirement document which lists the requirements to inspect and document unlisted electrical equipment prior to placing that equipment in service. The Site is sensitive to legacy equipment conditions, through the SRS preventive and corrective maintenance programs, and evaluates electrical equipment, accordingly. The program had been in place long before DOE-HDBK-1092-98 was issued, and has established its credibility and functional integrity, repeatedly, during that time.
No further action is planned at this time.

Issue # 3 " Electrical Safety Committee" The report identified the following:

"The Board's staff has observed that the Esc(s) at Pantex, Y-12, and SRS are involved primarily in the development of procedures and portions of the safety manual and are not performing all the duties and responsibilities set forth in Appendix A of the Electrical Safety Handbook. Weaknesses in electrical safety can potentially impact any activity or facility function, as virtually everyone is exposed to electrical hazards. The staff believes the role of the ESC at DOE sites needs to be strengthened."

Response:

The SRS equivalent to the ESC is the Senior Electrical Review Board (SERB). The SERB meets or exceeds the requirements outlined in DOE-HDBK-1092-98, Appendix A, section 3.3. The SERB is very actively involved with the implementation of the electrical safety program. The Board meets every month, is made up of senior electrical engineers, electricians, etc. from each WSRC division, a DOE Representative and has their management support. They review all reported electrical incidents, from both the previous and present months, and perform a root cause analysis of each incident. If necessary, the Board Chairman then assigns action items to the appropriate representative for continuous improvement opportunities. This may include a Lessons Learned Notification be written or a procurement investigation initiated by a SERB member. Other times an Electrical Safety Express newsletter is written and distributed to the site.

Electrical safety is the first item on every monthly agenda, and the agenda format is followed without deviation. The average attendance at these monthly meetings is fifteen

to twenty members, further demonstrating their individual commitment to the electrical safety program. The Board evaluates DOE Complex-wide notices, publications, and reported incidents as they are made available. They, likewise, receive the scrutiny of this highly qualified membership.

SRS workers routinely bring electrical safety issues before the SERB for guidance and interpretations. This interaction with the work force helps strengthen the overall program by keeping the program in tune with the needs of the worker.

Finally, the Board publishes their monthly Electrical Safety Indicator Report, their past meeting minutes, Electrical Newsletters, and all past Electrical Safety Express publications on the SERB Home Page. This Home Page is part of the SRS site network, and accessible to all workers, supervisors, managers, and safety specialists. The other DOE Complex electrical safety program representatives routinely contact the SERB for electrical safety concerns and program sanity checks. SRS plans to continue to utilize the Handbook as a resource for continuously improving its Electrical Safety Program. No further action is planned at this time.

Summary:

The SRS management team has made significant progress toward establishing and maintaining a highly effective Electrical Safety Program. Their commitment and dedication to success in all areas of safety has maintained an expectation of excellence, which pervades every area of daily operations. The Electrical Safety Program is no exception.

The "Department of Energy Model Electrical Safety Program (September 1993)" was one of the documents used to enhance the existing program. In 1994 a highly specialized and qualified team developed the "Electrical Safety Plan". This plan served as the platform for the format of the current program.

The SRS program has evolved over the years. It is continuously challenged, and openly evaluated for continuous improvement opportunities. The DOE Handbook on electrical Safety (DOE-HDBK-1092-98, January 1998) was thoroughly reviewed at the time of its publication and distribution. The Senior Electrical Review Board, and the SRS Electrical Safety Program had been in place and functioning effectively for more that three years prior to that time. Some additional improvements to the existing program were made at that time, as a result of that review.

The Handbook is continuously referenced by SRS, today, as the model DOE program. Although the SRS Program is not a replica of the Handbook, the inherent functional expectations of the model are consistently followed. Whenever a program policy or function is questioned by any of the SRS workgroups or departments, the Handbook is routinely referenced for program policy guidance.

Open communication with all Site workers and a commitment to continuous improvement have been identified as functional strengths of the SRS Electrical Safety Program, since it was formally implemented in 1996.